

The Impact Of Leader-Member Exchange On Psychological Safety In The Period Of Covid-19

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Abstract

The purpose of this study is to determine what needs to be done to strengthen the psychological safety of employees and increase the productivity of businesses during the Covid-19 period. A conceptual model including the effect of leader-member exchange on psychological safety has been proposed. The data were analyzed using the Jamovi 2.2 program. To test the proposed model, a questionnaire with 312 participants was conducted. According to the results of the analysis, it has been determined that the leader-member exchange has a significant positive effect on psychological safety. Despite previous studies on leader-member exchange focused on issues such as employee performance, this research includes the sub-dimensions of leader-member exchange in the research model to examine effect of leader-member exchange on psychological safety. In addition, findings of research is supposed to make contribution to managerial activities of institutions.

Keywords: Leader-Member Exchange, Psychological Safety, Covid-19

Introduction

Recently, the world has faced the most difficult health crisis of humanity since the Second World War, which threatened all of humanity and every aspect of human life. Human history is going through a very difficult time fighting an invisible enemy. A pandemic outbreak from China has reached all parts of the world and has turned into a state of emergency for almost all countries and severely disrupted the global economy. The world is on the verge of a massive and widespread recession, probably unprecedented in the recent past. To date, more than 70 million people worldwide have been affected by this crisis and more than 4 hundred thousand people have died from the infection; indirectly, billions of people have been adversely affected by the impact of this global pandemic. Some researchers have suggested that 40-70 percent of the world's population may be infected (Baldwin and Di Mauro, 2020). The virus has infected a total of 527,211,631 people with Covid-19 in 223 countries, regions, or regions as of June 1, 2022, and 6,289,371 people died (WHO, 2022). For employees in many organizations, this has created great uncertainty. The coronavirus epidemic has changed the way people work, with remote working, meeting protocols, travel bans, and social distancing becoming the new norm. In nearly all organizations, these changing ways of

working have raised questions and concerns. Besides the financial impact of the pandemic, the safety and well-being of employees have also been another area of concern for employers. Covid-19 has not only presented risks to the health and safety of employees; it also reduced employee feelings of security by increasing workplace stress and reducing employee productivity. In such a crisis, when employees understand that their employers are not risking their safety to improve their profit margins, they can be more satisfied and happier with their jobs and naturally contribute more to the their. Company managers, employers, business leaders, and human resources professionals have had to fight intensely to minimize the impact of the pandemic on employees' feelings of psychological safety and ensure their happiness at work. Because the higher the sense of psychological safety of the employees in a workplace, the more positively the performance of the employees is affected by the company. Managers should mitigate such unforeseen crises that cause increased uncertainty among the workforce and pose a direct threat to the performance and viability of organizations.

2. Literature Review

The pandemic poses a great threat to everyone's sense of psychological safety. It has been explained by scientists that a person working during the

pandemic is faced with a psychological state that is emotionally close to wartime feelings, rather than a normal workday feeling. However, some teams have been more successful than others during the remote working process that has continued throughout the pandemic. The feeling of being psychologically safe has been one of the most helpful feelings in adapting to changing conditions. From the perspective of employees' sense of psychological safety, the Covid-19 crisis has created panic for them or their families due to high uncertainty, even if they are not showing symptoms. It has been proven by studies that people do not feel psychologically safe in a working environment where they do not feel that they can talk, ask for help, or offer an idea, especially in times of crisis. In current stressful situations, employees naturally worry about the immediate, immediate, and long-term effects of the coronavirus. Employees rely entirely on government and employer guidance to stay employed, safe, and happy. While the state does its part, it has required employers to take responsibility for the struggle to ensure the safety and happiness of workers in these emergencies (de Flamingh and Fairhall, 2020).

This study, it is aimed to examine the effect of leader-member exchange on the psychological safety of employees, especially in the environment of uncertainty arising in businesses due to the Covid-19 process. In the literature, although some studies have emphasized that leader-member exchange has a positive relationship with the employees' feelings of psychological safety (Hu vd., 2018; Diaz, 2019; Oktavio, 2020; Mao ve Tian, 2022), the questions about how managers should act in negative situations such as the feeling of unhappiness and insecurity, the feelings of losing their job, which uncertain situations such as the pandemic process have revealed on employees in the last two years have formed.

2.1. COVID-19 Period

Declared a pandemic by the World Health Organization (WHO) on March 11, 2020, coronavirus (Covid-19) means a global disease that threatens the whole world (Hamouche, 2020, p. 3). The coronavirus, also known as SARS-CoV-2 or Covid-19, has an unprecedented impact as it spreads faster and reaches more countries than SARS or Ebola outbreaks (ILO, 2020). It was first detected in a group of patients with respiratory symptoms on 31 December 2019 in Wuhan Province, China. On January 31, 2020, the World Health Organization defined the virus as an international and urgent public health situation,

defined it as Coronavirus Disease-2019 (Covid-19) on February 11, 2020, and declared it a pandemic because it was a global epidemic (Karataş, 2020, p. 5). Before the Covid-19 epidemic, which threatens the whole world today, more than one epidemic was encountered in history. AIDS, smallpox, plague, and SARS (severe acute respiratory syndrome) are some of them (Özkoçak, et al., 2020, p. 1186). With the developing transportation network in the world, Covid-19 has made it easier to enter and exit between countries, allowing it to spread more quickly among people compared to the epidemics experienced before. This situation has also increased the impact of countries on health systems, economies, and society (Vieira et al., 2020, p. 38). Epidemics that affect societies negatively and deeply can cause widespread deaths. As a result, the ratio of the old and young population of society may change. Again, there is a decrease in the food, tourism, and other incomes of the countries, which negatively affects the economy of the countries (İşsever et al., 2020, p. 3). Covid-19, which threatens world countries especially economically, according to the OECD's 2 March 2020 Interim Economic Outlook Report; It states that Covid-19 has posed a great danger to the global economy since the financial crises (OECD, 2020). The common economic problems experienced by countries around the world during the Covid-19 process can be summarized as follows (Eryüzlü, 2020, pp. 13-14):

- Demand shock because of high expectations in the health sector and the increase in health expenditures, the inability of the current demand to take place in the market,
- Supply shock resulting from the deterioration of the supply chain, increases in unemployment rates,
- Problems that arise in the financial sector.

The impact of the Covid-19 period on the economies of countries around the world has also affected different labor markets. The downsizing and temporary or permanent closure of workplaces also negatively affected the employees. This process has brought about job and income losses for employees (Kara, 2020, p. 271).

2.2. Psychological Safety of Employees

Psychological safety is an element of organizational culture that supports employees to change their behavior and thinking styles, learn and develop (Schein & Bennis, 1965). Psychological safety refers to individuals' perceptions of the consequences of risks that may arise in their interpersonal relationships in the work environment

(Edmondson & Lei, 2014: 24). It serves as one of the building blocks of organizational learning that reinforces each other in the organization (Garvin et al., 2008). One of the three conditions that affect the employee's job attachment is psychological safety (Kahn, 1990). Psychological safety is defined as the degree to which people perceive their work environment as conducive to taking interpersonal risks (Edmondson, 2003). In this framework, interpersonal risks are directly related to the work and can make the actor vulnerable to professional criticism (Edmondson & Lei, 2014; Walters & Diab, 2016). Psychological safety is one of the multiple dimensions of organizational learning that must be attended simultaneously to create a meaningful, positive learning and a strong culture ready for change (Higgins et al., 2012). When psychological safety is present, it can promote collective learning and increase change towards the inclusion of new behaviors that improve individual and organizational performance (Edmondson et al., 2001; Morrow et al., 2010), as well as increase satisfaction. (Frazier et al., 2017; Newman et al., 2017). In the absence of psychological safety, individuals will lose their sense of belonging to each other or the leader and they will avoid talking, thus losing their learning and growth opportunities (Detert & Edmondson, 2005). Psychological safety is the state of work-related factors in the workplace that minimizes the risk of harming the employee's mental health or does not have the risk of harming the employee. Feelings of security are associated with predictable, consistent, clear, and non-threatening situations in which individuals understand the limits of acceptable behavior (Rich, 2006: 60). The fewer individuals encounter negativities that will prevent them from reaching their personal goals, the more they feel psychologically secure and thus they are more committed to their work (May et al., 2004: 159). While psychological protection of employees means greater job satisfaction, better performance, an increase in morale and commitment, and a reduction in stress-related illnesses, the opposite can happen when employees are not psychologically secure (Helsing et al., 2008). At the organizational level, true learning requires collective participation in the risk of moving away from familiar and often obstructive behavior patterns and understanding work toward a better but unknown future (Argyris, 1982). Therefore, and in line with the understanding that learning – whether at the individual or institutional level – involves risks, those working on psychological safety should well understand that the goal is to create a positive environment for learning.

Given its role in helping organizational members cope with the learning anxiety associated with normal levels of change, it is not surprising that scientists have long identified psychological trust as particularly important in organizations. (Edmondson et al., 2001; Nembhard & Edmondson, 2006; Weiner, 2014). Psychological safety culture is the attitudes, beliefs, and perceptions shared by natural groups that define norms and values that determine how they will react to risks and risk control systems (Erickson, 2000). A healthy person is free from disease, injury, or mental and emotional problems that impair normal human activity (Robert and John, 2004). Health management practices in organizations seek to protect the general well-being of individuals. Psychological safety, on the other hand, means protecting people's mental well-being. Oliveira and Almeida (2008) found in their study that psychological safety and occupational health have become integral components of management plans as a necessary dimension in sound business conduct.

The increase in the level of stress in the workplace and the lack of implementation of workplace policy are significantly associated with the lack of a sense of psychological safety in employees (Wong et al., 2020). Bennet (2002) found in his study that due to various management styles and lack of safety regulations, employees' views on occupational health and psychological safety in the workplace are often overlooked and little reflection is allowed for worker contribution. Employees often find themselves compelled to abide by the rules and policies currently in effect in the workplace. It turns out that in many industries, the psychological safety feelings of workers are sometimes ignored, and this creates negative situations in the development of companies.

Psychological safety is of great importance in the successful performance of activities in organizations today, with the cooperation of employees (Bettencourt & Brown, 1997). The division of work into specializations and their complexity with developing technology increases the importance of interpersonal cooperation in activities such as product design and strategy development (Edmondson & Lei, 2014). Psychological safety is considered an important element, especially when people cooperate for a common goal (Kahn, 1990; Edmondson 1999, 2002; May et al., 2004). Employees who feel psychologically safe do not worry about expressing their ideas, suggestions, and problems within the organization (Scheppers et al., 2008: 759). Studies show that employees who feel psychologically safe have high performance (Jha, 2018), emotional

commitment to the organization (Uğurlu & Ayas, 2016), job engagement (Tiwari & Lenka, 2016), and learning behaviors (Edmondson, 1999).

2.3. Leader-Member Exchange

Leader-member exchange is unique among all leadership theories as it does not assume that followers are passive recipients of leadership (Anand et al., 2018). The foundation of leader-member exchange is based on the development and negotiation of bilateral relations and job roles over time through a series of exchanges between leader and member (Bauer and Green, 1996). Some bilateral relationships result from positive work and emotional communication, while others are less positive or negative (Atwater & Carmeli, 2009). According to the status of these bilateral relations, the leader and the member support each other (Akgündüz et al. 2021). The level of this support varies according to many parameters such as the benefits they provide to each other, personal preferences (Gioia & Manz, 1985), compatibility, competence, conscientiousness, extroversion, openness, and positive and negative impact (Aggarwal et al., 2020).

Leader-member exchange generally has four sub-dimensions: contribution, loyalty, affect, and professional respect (Liden & Maslyn, 1998). Good leader-member exchange is based on quality relationships and enables employees to gain social support and approval so that ideas can be implemented effectively (Schermuly et al., 2013). Establishing such an interaction with the employee depends on the employee's contribution to the leader with his performance. The leader values the efforts of individuals and rewards the achievement of results consistent with the vision by praising and appreciating the efforts of the followers (Rafferty & Griffin, 2004). Subordinates whose performance affects the leader positively develop a higher quality leader-member exchange than subordinates who do not perform well compared to the leader (Bass, 1990). In this type of interaction, employees can access direct feedback on the ideas and plans created, use resources better, and receive more support in the implementation of solutions (Atitumpong & Badir, 2017). Loyalty in leader-member exchange is an important sub-dimension to determine the extent to which the leader and member openly support each other's actions and characters (Liden & Maslyn, 1998). Leaders who openly value and praise the achievements of their employees tend to develop a relationship of mutual loyalty with their employees (Keskes et al., 2018). The leader provides the demands of its members such as interesting tasks, additional responsibilities,

and greater rewards. In return, its members are expected to dedicate themselves to the work and be loyal to the leader (Yukl et al., 2008). Leader-member exchange can vary based on mutual love, that is, individuals' interpersonal attraction for each other (Liden & Maslyn, 1998). For example, the leader and the member may interact frequently just because they enjoy each other's company (Liden & Maslyn, 1998). Professional respect, which is one of the sub-dimensions of leader-member exchange, expresses the perception of the extent to which the leader or member has a reputation for being superior in their work area, both inside and outside the organization (Liden & Maslyn, 1998). When the manager is satisfied with the employee's qualifications, he or she engages the employee in more important organizational activities (Liden et al., 1997). This can be interpreted as the special treatment of the manager by the employee and the employee may feel indebted to the manager (Choy et al., 2015).

According to the social information processing theory, people's behaviors and attitudes are affected by the social environment they live in (Salancik & Pfeffer, 1978). The interaction between the leader and the members has a very important effect on the formation of expectations about what is appropriate and what is not (Edmondson, 2004). A high leader-member relationship is influenced by various factors such as business challenges, decision-making, and emotional support (Liden et al., 2000). In such a relationship, employees perceive their leaders as reliable and supportive (Graen & Uhl-Bien, 1995). Employees who feel trusted by their leaders generally feel safe while doing the job assigned to them, discussing mistakes, and sharing their knowledge (Nishii & Mayer, 2009; Carmeli et al., 2010; Van den Broeck et al., 2014). In a high-quality leader-member exchange, the leader spends more time working with his member and values their input more (van den Berg, 2010). Members who have poor-quality relationships with their leaders often experience stress and face discriminatory treatment. In an organization with a low level of leader-member exchange, members feel that they are not valued and trusted by their leaders, and the formation of psychological safety in employees is greatly hindered (Graen & Uhl-Bien, 1995; Hu et al., 2018; Diaz, 2019).

With the outbreak of the Covid-19 crisis, employees were forced to switch to remote work environments where they were not mentally prepared (Singh, 2021). One of the biggest changes felt by the increased teleworking has been the impact of this practice on human relations in the workplace (Varma et al. 2022). It has gained special importance to ensure that leaders feel

mentally safe with their employees. Leaders who do not have strong relationships with their employees have experienced a decrease in their commitment to work and performance with the transition to a remote working environment. (Varma et al., 2022).

Research Method

In the research, a model that includes leader-member exchange and psychological safety has been proposed. The research model is shown in Figure 1.

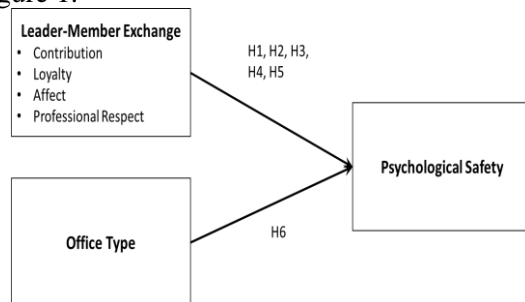


Figure 1: Research Model

H₁: Leader-Member exchange positively affects psychological safety.

H₂: Contribution, one of the sub-dimensions of Leader-Member exchange, positively affects psychological safety.

H₃: Loyalty, one of the sub-dimensions of Leader-Member exchange, positively affects psychological safety.

H₄: The affect, which is one of the sub-dimensions of Leader-Member exchange, positively affects psychological safety.

H₅: Professional respect, one of the sub-dimensions of Leader-Member Exchange, positively affects psychological safety.

H₆: Office type affects psychological safety level

The study, it was aimed to determine the effect of leader-member exchange on psychological safety during the Covid-19 period. For this purpose, a closed-ended questionnaire was prepared. The surveys participated online.

312 people participated in the research. Of these, 152 are women and 160 are men. 170 of them are in employee positions and 142 of them are in managerial positions. 131 of them stated that they work remotely, while 181 of them stated that they work face-to-face. It was observed that 71 of them were in the 18-27 age range, 105 were in the 28-35 age range, 91 were in the 36-45 age range, and 45 were 46 years old and over. It was determined that 30 of them had a high school level, 131 had a bachelor's degree, and 151 had a master's degree or higher. 23 of them stated that the company they

work for has between 1 and 9 employees, 101 of them have between 10 and 20 employees, 103 of them have between 21 and 50 employees, and 85 of them have between 51 and 150 employees.

The scales used in the research have been evaluated in many studies in the literature and their validity has been tested. The statements in the scales are of five-point Likert type and are graded between 1 (strongly disagree) and 5 (strongly agree). Leader-Member Exchange Scale: It was measured by Liden and Maslyn's (1998) 5-point Likert-type twelve-item scale. The sample items of the scale are "If I make a mistake unintentionally, my supervisor will protect me against others" and "I do not see working hard for my supervisor as a burden". Psychological Safety Scale: Edmondson's (1999) seven-item scale was used. Sample items of the scale are "If you make a mistake in this workplace, it is generally used against you by all employees" and "You do not easily ask for help from employees in this workplace".

Findings

The data were analyzed using the Jamovi 2.2 program. Descriptive statistics were used to describe the demographic profiles of the participants. Proposed hypotheses were tested by regression models using the car package in the R program (Fox and Weisberg, 2019). Factor analysis and reliability analysis were carried out according to the method developed by William Revelle (2019).

Reliability And Normality Analyses

Table 1. Reliability and Normality Analyses

Variables	Cu	N	Mean	Standard deviation	Skewness	Std. error skewness	Kurtosis	Std. error kurtosis	Shapiro-Wilk W	Shapiro-Wilk p
Psychological Safety	.845	312	2.94	0.878	0.0425	0.138	-0.439	0.275	0.990	0.027
Affect	.830	312	3.00	0.944	-0.525	0.138	0.739	0.275	0.913	< .001
Loyalty	.892	312	3.65	0.926	-0.597	0.138	0.236	0.275	0.938	< .001
Contribution	.865	312	3.88	0.941	-0.897	0.138	0.780	0.275	0.904	< .001
Professional	.860	312	3.35	1.12	-0.251	0.138	-0.766	0.275	0.949	< .001

The values in Table 1., indicate that all variables are reliable. In Table 1., the values of the data in the normality analysis of the model are given. The Shapiro-Wilk test was used to determine whether the data were normally distributed. According to this test, it was observed that the data were not normally distributed due to the low significance values. Therefore, the skewness and kurtosis values of the data were examined. Since the skewness and kurtosis values of the data were between -1.96 and 1.96, it was assumed that the data is normally distributed (Tabachnick and Fidell, 2007).

Factor Analysis

Table 2. Factor Analysis

	1	2	3	4	Uniqueness
LE1				0.734	0.199
LE2				0.767	0.190
LE3				0.741	0.205
LV1	0.727				0.193
LV2	0.788				0.180
LV3	0.735				0.206
LK1			0.743		0.249
LK2			0.700		0.202
LK3			0.690		0.207
LP1		0.827			0.200
LP2		0.756			0.260
LP3		0.873			0.157

The factor analysis results are given in Table 2. According to these results, the items in the leader-member exchange scale were normally divided into four factors as the original scale.

Difference Analysis

Table 3. Difference Analysis by Gender

Independent Samples T-Test				
	Mean Male-Female	Statistic	df	P
PS	2.95-	-0.345	310	0.730
LMX	3.62- 3.72	1.067	310	0.287
AFF	3.71- 3.90	1.831	310	0.068
LOY	3.60- 3.71	1.034	310	0.302
CONT	3.81- 3.94	1.185	310	0.237
PROFESSIONAL	3.36- 3.34	-0.211	310	0.833

Independent Samples T-test was applied to test if there is a perception difference by gender in Table 3. The results indicate that the significance values in all variables in the model were greater than 0,05 percent, therefore, gender did not create a significant difference in the variables.

Table 4. Difference Analysis by Working Position

Independent Samples T-Test				
	Mean Worker-Manager	Statistic	df	P
PS	2.70- 3.23	-5.55	310	< .001
LMX	3.53- 3.84	-3.39	310	< .001
AFF	3.68- 3.94	-2.41	310	0.016
LOY	3.57- 3.75	-1.73	310	0.086
CONT	3.75- 4.03	-2.68	310	0.008
PROFESSIONAL	3.10- 3.65	-4.37	310	<0.001

Table 4 shows the results of the difference analysis according to the position. It was observed that loyalty and contribution variables are insignificant ($p>0,05$). On the contrary overall leader-member exchange, affect, professional respect and psychological safety variables are significantly ($p<0,05$) differing according to working position.

Table 5. Difference Analysis by Office Type

Independent Samples T-Test				
	Mean Remote - Face to face	Statistic	df	p
PS	2.23- 3.45	-16.73	310	< .001
LMX	3.35- 3.90	-6.00	310	< .001
AFF	3.53- 4.00	-4.46 ^a	310	< .001
LOY	3.41- 3.83	-4.04 ^a	310	< .001
CONT	3.66- 4.03	-3.53	310	< .001
PROFESSIONAL	2.82- 3.73	-7.72	310	< .001

^a Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances.

Table 5 shows the results of the difference analysis according to the office type. Results indicate that perception levels significantly ($p<0,05$) differ for all variables in the model.

Table 6. Difference Analysis by Age

	F	df1	df2	P
PS	94.34	3	109.4	< .001
LMX	9.08	3	88.1	< .001
AFF	5.45	3	87.6	0.002
LOY	5.81	3	88.3	0.001
CONT	3.50	3	87.5	0.019
PROFESSIONAL	19.30	3	93.0	< .001

One Way ANOVA test was conducted to test if there is a significant difference according to age groups. Results (Table 6) indicate that all variables are significantly differing according to age groups. Therefore, the Tukey Post-Hoc test was applied to figure out which groups are varying from each other.

The mean of psychological safety between the ages of 18-27 is smaller than the mean of the age range of 28-35 ($p<0.001$). The mean of psychological safety between the ages of 18-27 is smaller than the mean of the age range of 36-45 ($p<0.001$). The mean of psychological safety between the age range of 18-27 years is smaller than the mean of those aged 46 years and older ($p<0.001$). The mean of psychological safety between the age range of 28-35 is smaller than the mean of those aged 46 and above ($p<0.001$). The mean of psychological safety between the age range of 36-45 is smaller than the mean of those aged 46 and above ($p=0.0052$).

The mean of 18-27 of the leader-member exchange is smaller than the mean of the age range of 28-35 of the leader-member exchange ($p<0.001$). The mean of leader-member exchange between the ages of 18-27 is smaller than the mean of the age range of 36-45 ($p<0.001$). The mean of the leader-member exchange between the age range of 18-27 is smaller than the mean of those aged 46 and above ($p<0.001$). The mean of leader-member exchange between the 36-45 age range is smaller than the mean of those aged 46 and above ($p=0.023$).

The mean of the affect, between the ages of 18-27 is smaller than the mean of the age range of 28-35 ($p=0.005$). The mean of the affect between the ages of 18-27 is smaller than the mean of those aged 46 and above ($p<0.001$).

The mean of loyalty between the ages of 18-27 is smaller than the mean of the age range of 28-35 ($p=0.001$). The mean of loyalty between the 18-27 age range is smaller than the mean of those aged 46 and above ($p<0.001$).

The mean of the 18-27 age range of contribution is smaller than the mean of the 28-35 age range of contribution ($p<0.001$). The mean of contribution between the ages of 18-27 is smaller than the mean of those aged 46 and above ($p<0.001$). The mean of contribution between the 36-45 age range is smaller than the mean of those aged 46 and above ($p<0.019$).

The mean of professional respect for the ages of 18-27 is smaller than the mean of the age range of 28-35 ($p<0.001$). The mean of professional respect for the ages of 18-27 is smaller than the mean of the age range of 36-45 ($p<0.001$). The mean of professional respect for the ages of 28-35 is smaller than the mean of those aged 46 and above. ($p<0.054$).

Table 7. Difference Analysis by Age

	F	df1	df2	P
PS	2.94	2	86.0	0.058
LMX	6.67	2	88.0	0.002
AFF	4.01	2	86.4	0.022
LOY	2.21	2	87.4	0.116
CONT	7.61	2	84.5	< .001
PROFESSION	5.62	2	82.9	0.005
AL				

One Way ANOVA test was used in Table 7. According to this test, which was used to test whether the variables differed from each other according to education, it was observed that the variables of leader-member exchange, affect, contribution, and professional respect had a significant difference. The post-hoc test was applied for these variables. The mean of leader-member exchange for high school education is smaller than the mean of undergraduate education ($p=0.027$). The mean of leader-member exchange for undergraduate education is bigger than the mean of graduate education ($p=0.008$). The mean of the contribution for high school education is smaller than undergraduate education ($p=0.038$). The mean of the contribution for undergraduate education is bigger than the mean of graduate education ($p=0.002$). The mean of professional respect for high school education is smaller than the mean of undergraduate education ($p=0.012$). The mean of professional respect for undergraduate

education is bigger than the mean of graduate education ($p=0.029$).

Table 8. Difference Analysis by Firm Size

	F	df1	df2	P
PS	94.34	3	109.4	< .001
LMX	9.08	3	88.1	< .001
AFF	5.45	3	87.6	0.002
LOY	5.81	3	88.3	0.001
CONT	3.50	3	87.5	0.019
PROFESSION	19.30	3	93.0	< .001
AL				

One Way ANOVA test was used in Table 8. According to this test, which is used to test whether the variables are different from each other according to the size of the firm, it has been observed that all variables have a significant difference.

The mean of psychological safety for between 1-20 employees is smaller than the mean of 21-50 employees in the company ($p<0.001$). The mean of psychological safety between 1-20 employees is smaller than the mean of 51-150 employees in the company ($p<0.001$). The mean of psychological safety among those with 1-20 employees in the company is smaller than the mean of those with more than 150 employees ($p<0.001$). The mean of psychological safety between 21-50 employees is smaller than the mean of 51-150 employees in the company ($p=0.043$). The mean of psychological safety between 21-50 employees in the company is smaller than the mean of those with more than 150 employees ($p<0.001$). The mean of psychological safety between 51-150 employees in the company is smaller than the mean of those with more than 150 employees ($p<0.001$).

The mean of leader-member exchange between 1-20 employees is smaller than the mean of those 21-50 employees in the company ($p<0.001$). The mean of leader-member exchange between the number of employees in the company between 1-20 is smaller than the mean of those the number of employees between 51-150 ($p<0.001$). The mean of leader-member exchange between 1-20 employees in the company is smaller than the mean of those with more than 150 employees ($p<0.001$).

The mean of the affect between 1-20 employees is smaller than the mean of those 21-50 employees ($p<0.001$). The mean of affect with 1-20 employees is smaller than the mean of 51-150 employees in the company ($p<0.001$). The mean of the affect of those with 1-20 employees in the company is smaller than the mean of those with more than 150 employees ($p<0.001$).

The mean of loyalty for those with 1-20 employees is smaller than the mean of those with 21-50 employees ($p<0.001$). The mean of loyalty between

1-20 employees is smaller than the mean of those 51-150 employees in the company(p<0.001). The mean of loyalty the number of employees in the company between 1-20 is smaller than the number of employees over 150 (p<0.001).

The mean of contribution for those with 1-20 employees is smaller than the mean of 21-50 employees (p=0.001). the mean of the contribution between 1-20 employees is smaller than the mean of 51-150 employees in the company (p<0.001). The mean of contribution with 1-20 employees in the company is smaller than the mean of those with more than 150 employees (p<0.001).

The mean of professional respect for those with 1-20 employees is smaller than the mean of 21-50 employees in the company (p<0.001). The mean of professional respect between 1-20 employees is smaller than the mean of 51-150 employees in the company (p<0.001). The mean of professional respect for the number of employees in the company between 1-20 is smaller than the mean of the number of employees over 150 (p<0.001). The mean of professional respect for the number of employees in the company between 21-50 is smaller than the mean of the number of employees over 150 (p<0.001). The mean of professional respect for the number of employees in the company between 51-150 is smaller than the mean of those with more than 150 employees (p<0.005).

Correlation and Regression Analysis

Table 9. Correlation Matrix

	PS	LMX	AFF	LOY	CONT	PROFESSIONAL
PS Pearson's r	—					
p-value	—					
LMX Pearson's r	0.524	—				
p-value	<.001	—				
AFF Pearson's r	0.345	0.846	—			
p-value	<.001	<.001	—			
LOY Pearson's r	0.414	0.871	0.651	—		
p-value	<.001	<.001	<.001	—		
CONT Pearson's r	0.345	0.870	0.676	0.768	—	
p-value	<.001	<.001	<.001	<.001	—	
PROFESSIONAL Pearson's r	0.634	0.810	0.569	0.571	0.543	—
p-value	<.001	<.001	<.001	<.001	<.001	—

Table 9 shows the values explaining the relationship between the variables in the model and psychological safety. Accordingly, there is a moderately positive and significant relationship between leader-member exchange and psychological safety (r=0.524, p<0.001). As the interaction between the leader and the member increases, psychological safety will also increase. There is a low-intensity, positive and significant relationship between affect, which is one of the sub-dimensions of leader-member exchange, and psychological safety (r=0.345, p<0.001). There is a moderately positive and significant relationship between loyalty, which is one of the sub-dimensions of

leader-member exchange, and psychological safety (r=0.414, p<0.001). There is a weak, positive, and significant relationship between contribution, which is one of the sub-dimensions of leader-member exchange, and psychological safety (r=0.345, p<0.001). There is a highly positive and significant relationship between professional respect and psychological safety, which is one of the sub-dimensions of leader-member exchange (r=0.634, p<0.001).

Table 10. Regression Analysis of the Relationship Between Leader-Member Exchange and Psychological safety (Univariate)

Predictor	Estimate	SE	t	p	Overall Model Test	
					R ²	F
Intercept	0.912	0.1919	4.75	<.001	0.274	117
LMX	0.552	0.0510	10.82	<.001		

Table 10 containing the effect of leader-member exchange on psychological safety is shown above. According to this Table, it was seen that leader-member exchange positively and significantly affected psychological safety (p<0.001). Leader-member exchange explains the %27,4 variance for the psychological safety variable. According to this result, the H1 hypothesis was supported. This finding was consistent with previous studies (Hu et al., 2018; Diaz, 2019; Oktavio,2020; Mao and Tian, 2022).

Table 11. Regression Analysis of the Relationship Between Leader-Member Exchange and Psychological safety (Sub-Dimensional)

Predictor	Estimate	SE	t	p	Overall Model Test	
					R ²	F
Intercept	1.2491	0.1783	7.006	<.001	0.411	53.5
AFF	-0.0567	0.0598	-0.948	0.344		
LOY	0.1422	0.0693	2.053	0.041		
CONT	-0.0603	0.0689	-0.876	0.382		
PROFESSIONAL	0.4828	0.0442	10.932	<.001		
AL						

Values about whether leader-member exchange sub-dimensions affect psychological safety are shown in Table 11. Sub-Dimensional Leader member exchange explain the %41,1 of variance for psychological safety variable. According to the results, the affect and contribution, which are the sub-dimensions of leader-member exchange, did not affect psychological safety. According to this result, H2 and H4 hypotheses were not supported. It was determined that loyalty affects psychological safety positively and significantly (p=0.041). According to this result, hypothesis H3 was supported. Loyalty is the degree to which the leader and member openly support their actions and characters (Liden & Maslyn, 1998). Employees

who feel supported by their leaders do not hesitate to express their opinions freely and feel psychologically secure. Professional respect was found to affect psychological safety positively and significantly ($p < 0.001$). According to this result, the H5 hypothesis was supported. Professional respect is the perception of the extent to which the leader or member has a reputation for being superior in their field of work, both inside and outside the organization (Liden & Maslyn, 1998). Leaders who think that the employee is an expert in their field trust the decisions made by the employee, which ensures that the employee is psychologically safe.

Table 12: Binominal Logistic Regression Analysis by Office Type

Predictor	Estimate	SE	Z	p	Odds Ratio
Intercept	-8.356	1.148	-7.280	< .001	2.35e-4
PS	3.264	0.383	8.523	< .001	26.155
LMX	-0.140	0.250	-0.560	0.576	0.870

According to the results in Table 12, psychological safety levels of those who work in face-to-face office is significantly high. ($p < 0.001$). Accordingly, it can be said that individuals with high psychological safety values are more likely to be individuals who work face-to-face environment.

Discussion And Conclusion

In this study, the effect of leader-member exchange on psychological safety during the Covid-19 period was examined. The study first tried to observe whether the remote working method, which increased with Covid, creates a difference in this relationship. Then, it was examined whether leader-member exchange, psychological safety, and demographic characteristics made a difference. In the literature review examining the relationship between leader-member exchange and psychological safety, it was stated that employees who feel trusted by their leaders generally feel safe while doing the job assigned to them, discussing their mistakes, and sharing their knowledge (Nishii & Mayer, 2009; Carmeli et al., 2010; Van den Broeck). et al., 2014). According to the results obtained, it was seen that leader-member exchange had a positive effect on psychological safety. It was examined how the sub-dimensions of leader-member exchange affect psychological safety and it was determined that the affect and contribution of the sub-dimensions of leader-member exchange did not affect psychological safety. It has been determined that loyalty affects psychological safety in a positive and meaningful way. Professional respect, on the other hand, has

been found to affect psychological safety positively and significantly.

The pandemic has changed the lives, ways of doing business, and priorities of company executives all over the world. In this uncertain environment, managers; have experienced how important their employees are to ensure the continuity and continuity of their companies and that they need to produce various strategies in order not to lose this potential. The most prominent concept in this uncertain environment is the sense of psychological safety of employees, and it has emerged as a subject that managers should focus on. Creating psychological safety in the workplace requires dedication and skill. In environments where psychological safety does not occur, people are expected to be reluctant to share their opinions and be reluctant to ask questions. Considering this trend; The free sharing of ideas, concerns, and questions is regularly hindered. Reversing this habit takes focus and effort, and this process of helping people develop new beliefs and behaviors does not happen easily or naturally. To ensure psychological safety, employees should be treated the way they want, and employees should be asked what kind of communication they would prefer. Constructive questions should be rewarded and people should be asked more questions. In this way, intra-team communication becomes better, which can increase commitment to the organization. In this context, it is important to create a healthy conflict environment. Setting hierarchical rules and limiting communication hurts the creation of a secure environment.

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